MIGS 26

55TH GLOBAL CONGRESS ON MIGS

BOSTON, MASSACHUSETTS
NOVEMBER 13-16, 2026

Syllabus

Panel 555

From Symptoms to Surgery: Practical Neuropelveology for the MIGS Surgeon

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Panel-555: From Symptoms to Surgery: Practical Neuropelveology for the MIGS Surgeon

Chair: Benoit Rabischong
Co-Chair: Sarah Choi
Faculty: Vito Chiantera, Sarah Choi, Nucelio Lemos Benoit Rabischong

Course Description

This panel will provide participants with a practical introduction to neuropelveology concepts directly applicable to the modern management of endometriosis and chronic pelvic pain. Through an anatomy-driven approach, faculty will discuss how specific pain and dysfunction patterns can help identify pelvic nerve involvement and guide more accurate diagnosis of endometriosis and pelvic nerve entrapments. The session will also focus on the principles and surgical mindset required to develop nerve-sparing surgical skills in complex pelvic surgery. Advanced neuropelveology approaches to parametrial and sacral plexus endometriosis will be reviewed, emphasizing surgical anatomy, patient selection, and operative strategies aimed at maximizing disease clearance while preserving pelvic organ function.

Learning Objectives: *At the end of this course, the participant will be able to:* 1) Recognize site-specific pain and dysfunction patterns suggestive of pelvic nerve involvement in patients with endometriosis and chronic pelvic pain; 2) Describe key neuropelveology concepts relevant to the diagnosis and surgical management of pelvic nerve entrapments; 3) Identify the fundamental principles and operative strategies of nerve-sparing pelvic surgery; 4) Apply surgical approaches to parametrial and sacral plexus endometriosis, including relevant pelvic neuroanatomy and technical considerations; and 5) Apply neuropelveology-based reasoning to improve surgical planning and functional outcomes in complex endometriosis surgery.

Course Outline

3:15 pm	Welcome, Introduction and Course Overview	B. Rabischong
3:20 pm	Pain and Dysfunction Patterns in Endometriosis and Pelvic Nerve Entrapments: Site-Specific Symptom Recognition for Optimal Diagnosis	N. Lemos
3:35 pm	How to Become a Nerve-Sparing Surgeon	B. Rabischong
3:50 pm	Neuropelveology Approaches to Sacral Plexus and Parametrial Endometriosis	V. Chiantera
4:05 pm	Discussion Questions & Answers	S. Choi
4:15 pm	Adjourn	

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Disclosure of Relevant Financial Relationships

As an ACCME-accredited provider, AAGL is responsible for ensuring that accredited education is fair, balanced, free of commercial bias, and supports safe, effective patient care. AAGL maintains control over all aspects of educational planning, content, faculty selection, delivery, and evaluation.

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Asterisk (*) denotes no financial relationships with ACCME-defined ineligible companies to disclose.

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The following members of AAGL have been involved in the educational planning and/or review of this course (listed in alphabetical order by last name).

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Amani Harris, MD*
Ted Lee, MD – Advisory/Consultant: Johnson & Johnson, Regeneron Pharmaceuticals
Nucelio Lemos, MD, PhD – Speakers Bureau: Pfizer, Inc., Medtronic; Advisory Board: Knight Therapeutics, Vecfer Pharma
Mario Malzoni, MD*
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Linda Michels, Executive Director, AAGL*

COURSE CHAIR DISCLOSURE

Benoit Rabischong, MD, PhD *

COURSE CO-CHAIR DISCLOSURE

Sarah Choi, MD*

FACULTY DISCLOSURES

The following faculty have agreed to support their presentations and clinical recommendations with the best available evidence from the medical literature (in alphabetical order by last name).

Vito Chiantera, MD*
Sarah Choi, MD*
Nucelio Lemos, MD, PhD - Speakers Bureau: Knight Therapeutics, Pfizer; Vecfer Pharma: Advisory Board
Benoit Rabischong, MD, PhD *

MITIGATION OF RELEVANT FINANCIAL RELATIONSHIPS

All relevant financial relationships have been mitigated.

Drs. Lee, Lemos, Mikhail, and Chaudhari's planning decisions, as part of the Scientific Program Committee (SPC), were peer reviewed by other planners on the SPC who had disclosed no financial relationships with ineligible companies, and found to be fair, balanced, and free of commercial bias. Dr. Moawad's financial relationships ended 12/2024, thus mitigating them. For most of his AAGL Professional Education Committee service, Dr. Mourad had no financial relationships to disclose. He recently disclosed a new relationship as a Proctor for Intuitive Surgical. Since then, he has not participated in activities involving control or influence over accredited educational content; therefore, no additional mitigation was necessary.

The presentation content for course faculty, Dr. Lemos, has been peer reviewed and found to be fair, balanced, and free from commercial bias.

Pain and Dysfunction Patterns in Endometriosis and Pelvic Nerve Entrapments:

Site-Specific Symptom Recognition for Optimal Diagnosis

Nucelio Lemos, MD, PhD
Professor of Obstetrics and Gynecology, Friedrichsen-Cooper Chair of Endometriosis and Chronic Pelvic Pain, University of Toronto
Head of the Pelvic Neurodysfunction Division, Dept. of Gynecology, Federal University of São Paulo, Brazil
Chief of the Dept. of Gynecology and Neuropelveology of the Increasing, São Paulo, Brazil

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Financial Disclosures

- Speaker for Pfizer Inc.
- Speaker for Knight Therapeutics
- Advisory Board for Vecfer Pharma

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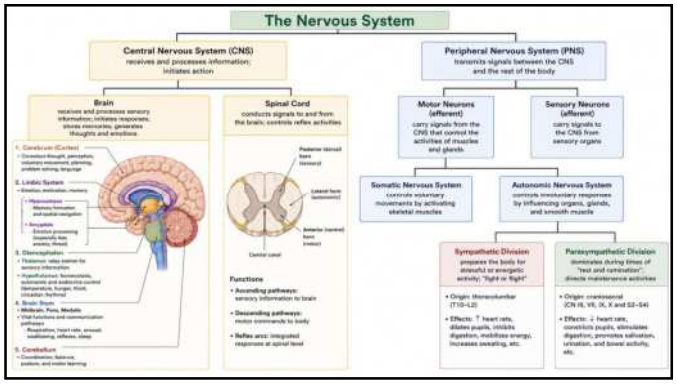


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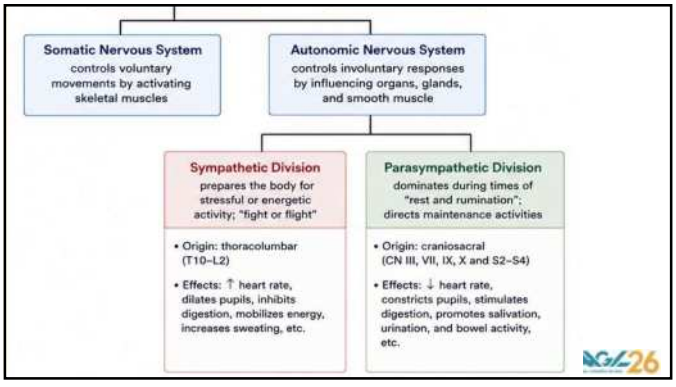
Objectives

- Review the General Structure and Organization of the Nervous System
- Review the anatomy of the nerve bundles crossing the pelvis
- Correlate Symptom Pattern to the Location and Etiology of the Lesion

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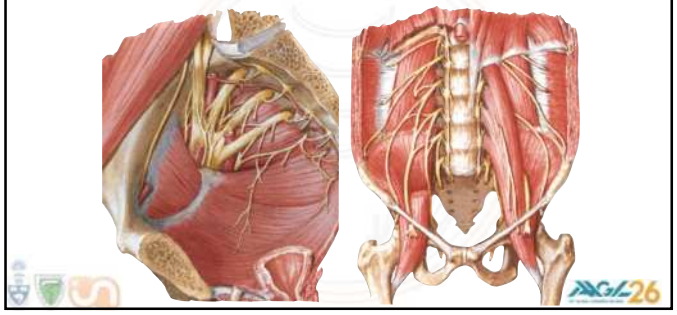


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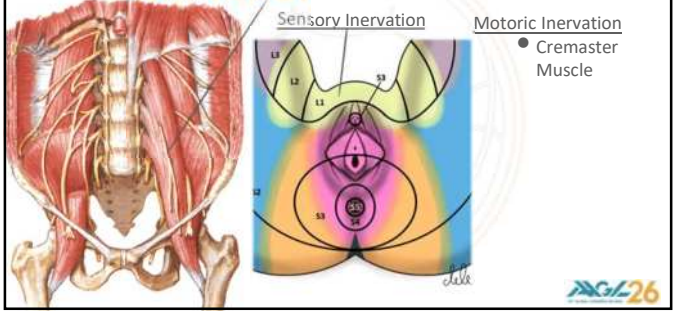
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Somatic Nerve Bundles in the Pelvis



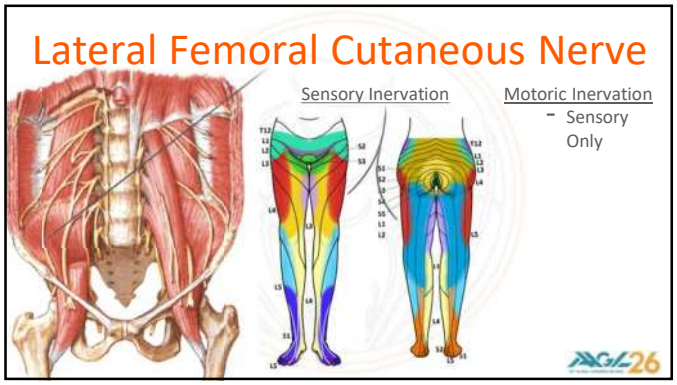
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Genitofemoral Nerve



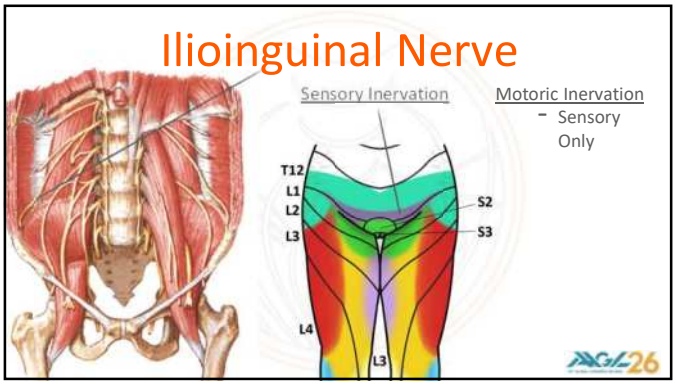
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Lateral Femoral Cutaneous Nerve



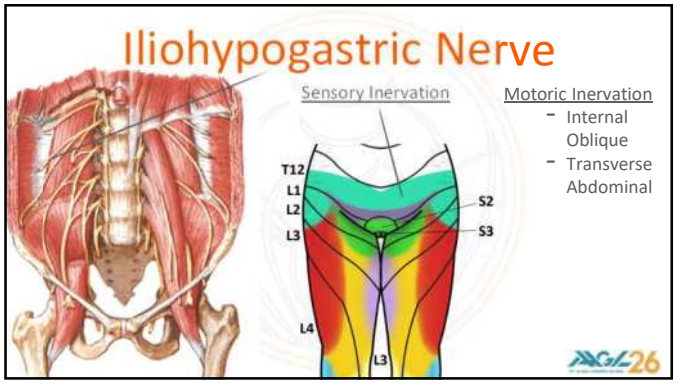
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Ilioinguinal Nerve



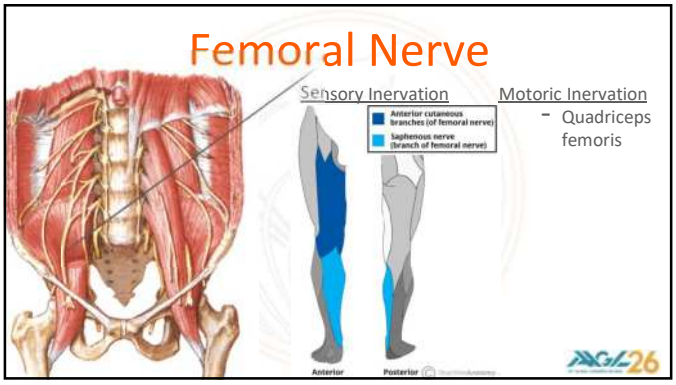
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Iliohypogastric Nerve



11

Femoral Nerve



12

Obturator Nerve

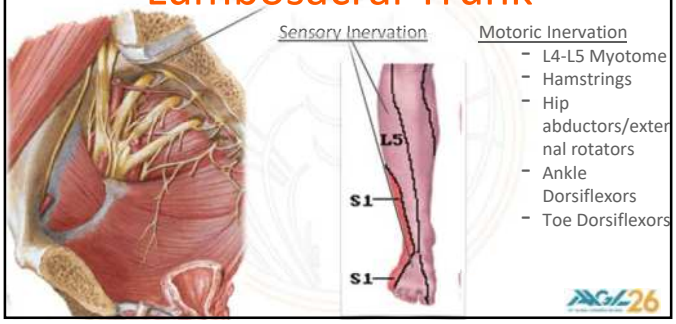


Sensory Inervation

Motoric Inervation
- Adductor muscles of the thigh
  - Obturator externus
  - Adductor longus
  - Adductor brevis
  - Gracilis
  - Pectineus
  - Adductor magnus

13

Lumbosacral Trunk



Sensory Inervation

Motoric Inervation
- L4-L5 Myotome
- Hamstrings
- Hip abductors/external rotators
- Ankle Dorsiflexors
- Toe Dorsiflexors

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Superior Gluteal Nerve

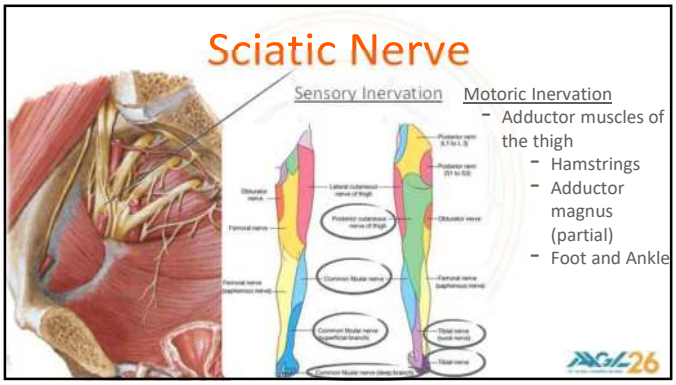


Sensory Inervation
No cutaneous Branches

Motoric Inervation
- Abductor/external rotators of the thigh/hip
  - Gluteus medius
  - Gluteus minimus
  - Tensor fasciae latae

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Sciatic Nerve

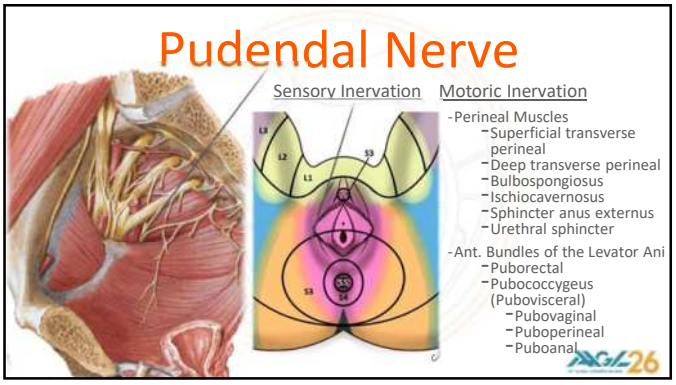


Sensory Inervation

Motoric Inervation
- Adductor muscles of the thigh
  - Hamstrings
  - Adductor magnus (partial)
  - Foot and Ankle

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Pudendal Nerve

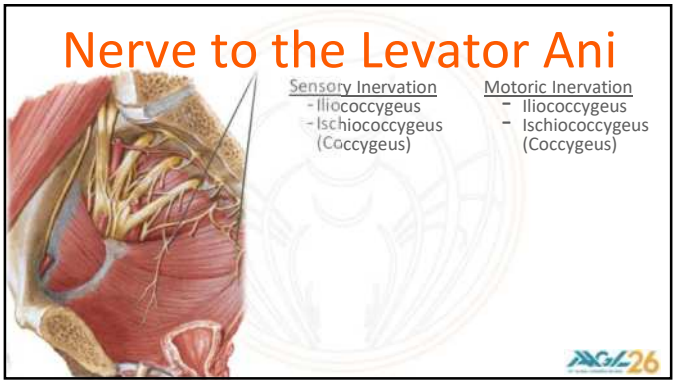


Sensory Inervation

Motoric Inervation
- Perineal Muscles
  - Superficial transverse perineal
  - Deep transverse perineal
  - Bulbospongiosus
  - Ischiocavernosus
  - Sphincter anus externus
  - Urethral sphincter
- Ant. Bundles of the Levator Ani
  - Puborectal
  - Pubococcygeus (Pubovisceral)
    - Pubovaginal
    - Puboperineal
    - Puboanal

17

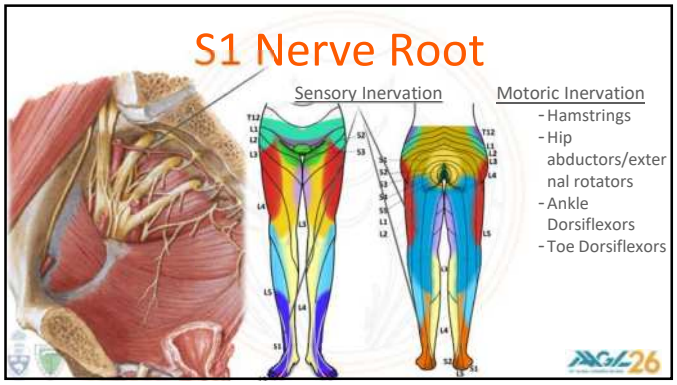
Nerve to the Levator Ani



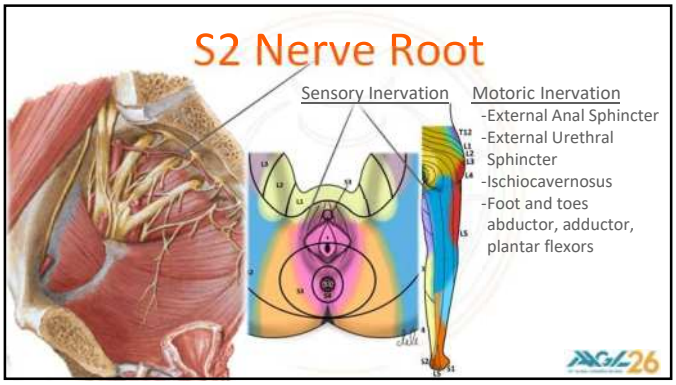
Sensory Inervation
- Iliococcygeus
- Ischiococcygeus (Coccygeus)

Motoric Inervation
- Iliococcygeus
- Ischiococcygeus (Coccygeus)

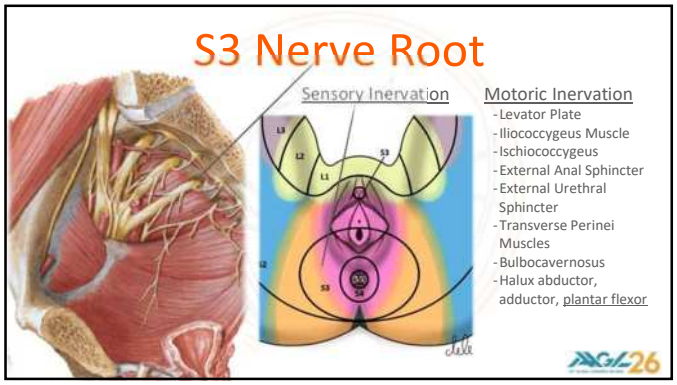
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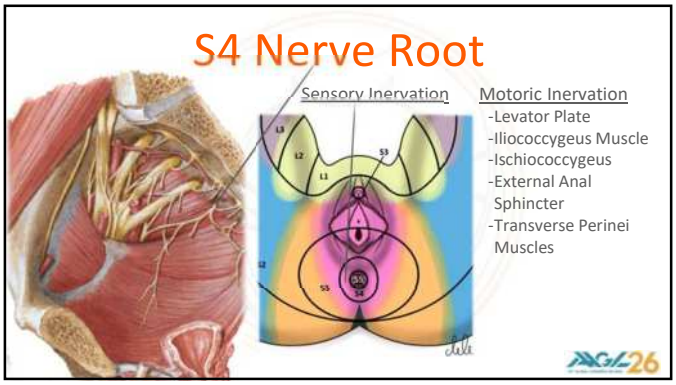
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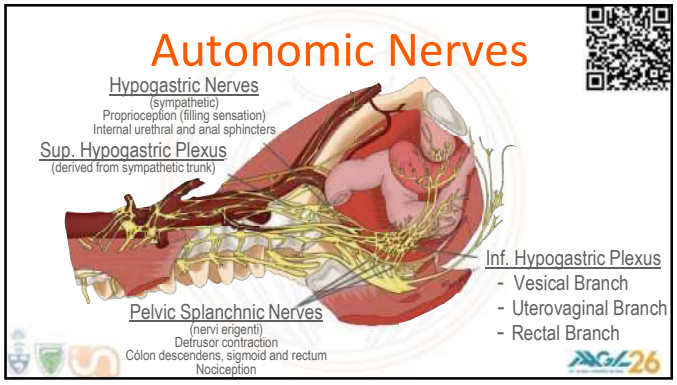
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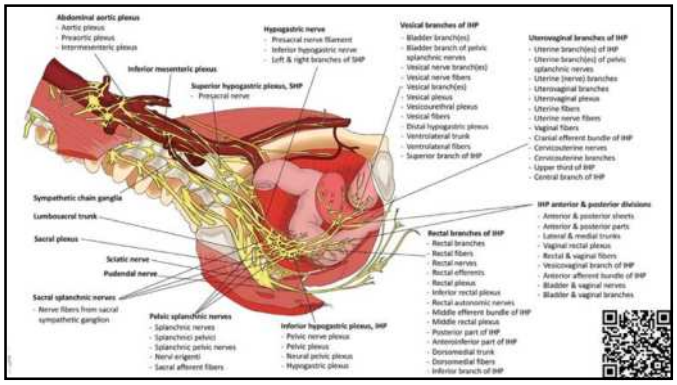
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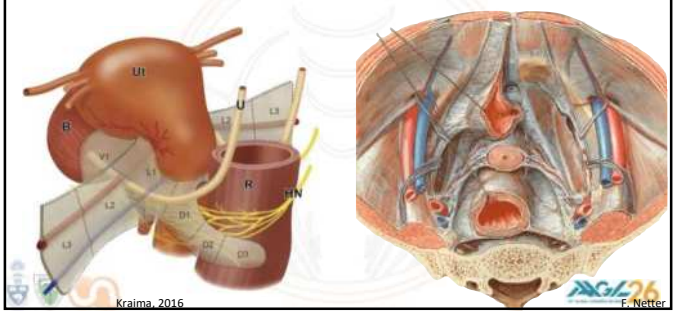


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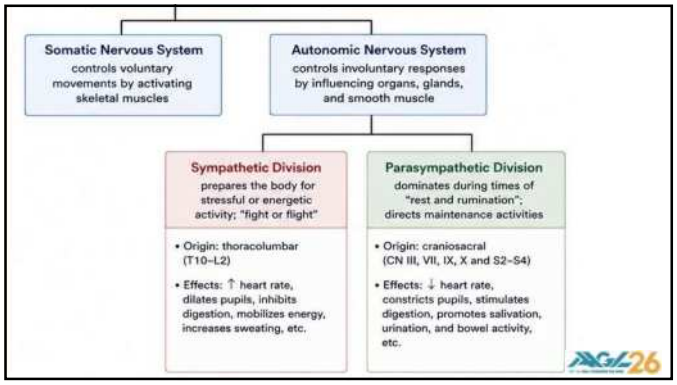
Parametrial Innervation



Kraima, 2016

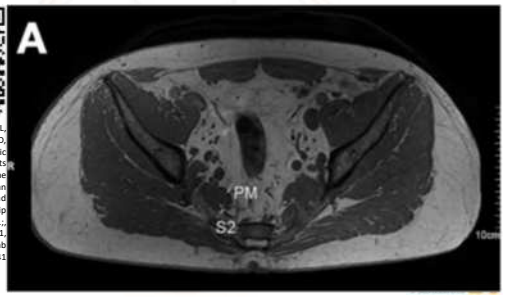
F. Netter

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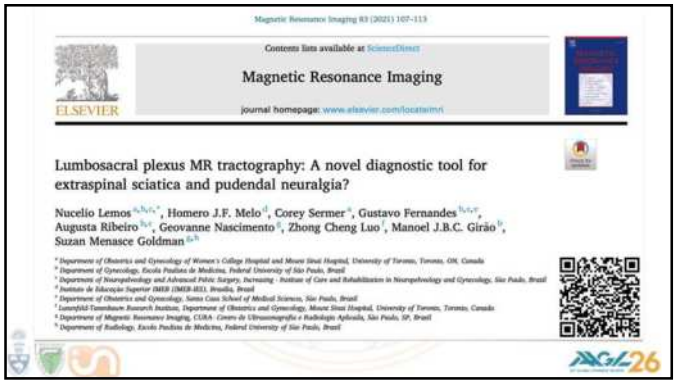
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Imaging

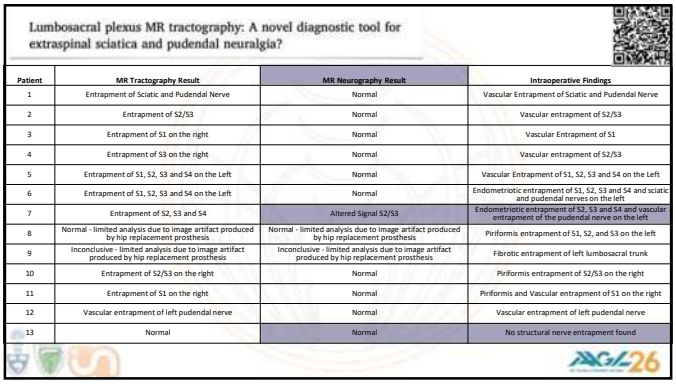


Sermer C, Li ALK, Fernandes GL, Ribeiro AM, Polesello G, Tokechi D, Cancelliere L, Lemos N. Intrapelvic entrapment of sacral nerve roots by abnormal bundles of the piriformis muscle: description of an extra-spinal cause of sciatica and pudendal neuralgia. Journal of Hip Preservation Surgery, 2021;, hnab041, https://doi.org/10.1093/jhps/hnab041

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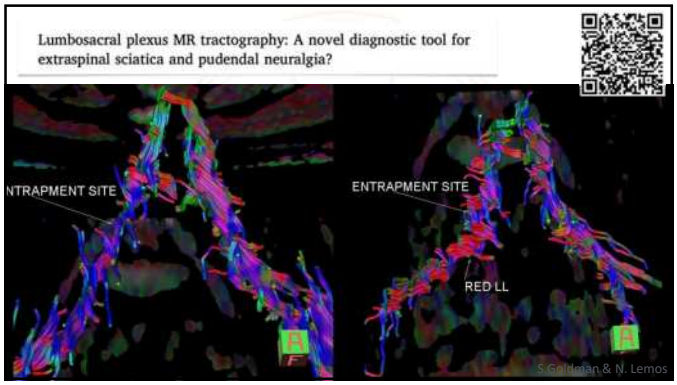
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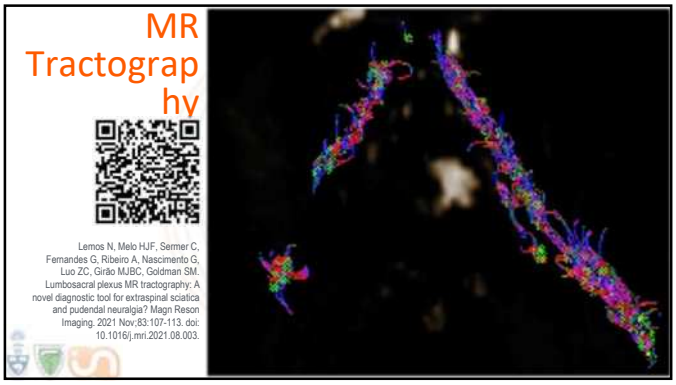
Lumbosacral plexus MR tractography: A novel diagnostic tool for extraspinal sciatica and pudendal neuralgia?

Patient	MR Tractography Result	MR Neurography Result	Intraoperative Findings
1	Entrapment of Sciatic and Pudendal Nerve	Normal	Vascular Entrapment of Sciatic and Pudendal Nerve
2	Entrapment of S2/S3	Normal	Vascular entrapment of S2/S3
3	Entrapment of S1 on the right	Normal	Vascular Entrapment of S1
4	Entrapment of S3 on the right	Normal	Vascular entrapment of S2/S3
5	Entrapment of S1, S2, S3 and S4 on the Left	Normal	Vascular Entrapment of S1, S2, S3 and S4 on the Left
6	Entrapment of S1, S2, S3 and S4 on the Left	Normal	Endometriotic entrapment of S1, S2, S3 and S4 and sciatic and pudendal nerves on the left
7	Entrapment of S2, S3 and S4	Altered Signal S2/S3	Endometriotic entrapment of S2, S3 and S4 and vascular entrapment of the pudendal nerve on the left
8	Normal - limited analysis due to image artifact produced by hip replacement prosthesis	Normal - limited analysis due to image artifact produced by hip replacement prosthesis	Piriformis entrapment of S1, S2, and S3 on the left
9	Inconclusive - limited analysis due to image artifact produced by hip replacement prosthesis	Inconclusive - limited analysis due to image artifact produced by hip replacement prosthesis	Fibrotic entrapment of left lumbosacral trunk
10	Entrapment of S2/S3 on the right	Normal	Piriformis entrapment of S2/S3 on the right
11	Entrapment of S1 on the right	Normal	Piriformis and Vascular entrapment of S1 on the right
12	Vascular entrapment of left pudendal nerve	Normal	Vascular entrapment of left pudendal nerve
13	Normal	Normal	No structural nerve entrapment found

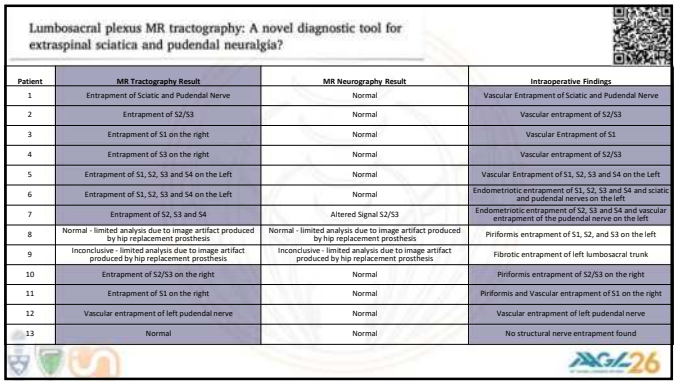
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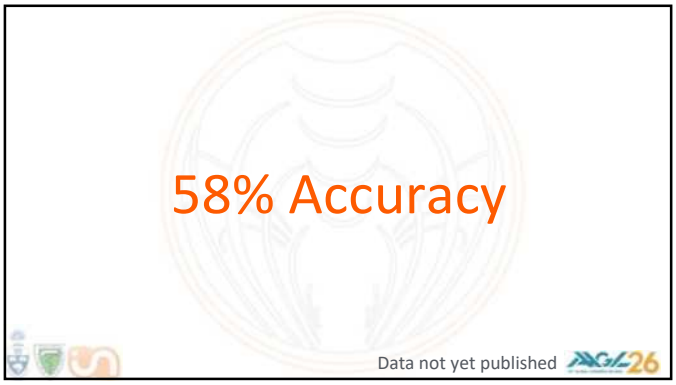


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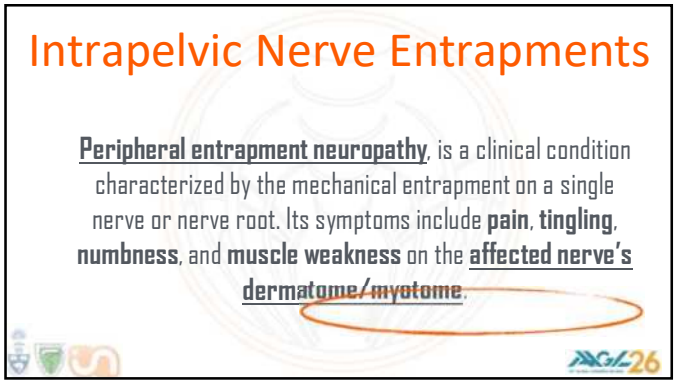


Patient	MR Tractography Result	MR Neurography Result	Intraoperative Findings
1	Entrapment of Sciatic and Pudendal Nerve	Normal	Vascular Entrapment of Sciatic and Pudendal Nerve
2	Entrapment of S2/S3	Normal	Vascular entrapment of S2/S3
3	Entrapment of S1 on the right	Normal	Vascular Entrapment of S1
4	Entrapment of S3 on the right	Normal	Vascular entrapment of S2/S3
5	Entrapment of S1, S2, S3 and S4 on the Left	Normal	Vascular Entrapment of S1, S2, S3 and S4 on the Left
6	Entrapment of S1, S2, S3 and S4 on the Left	Normal	Endometriotic entrapment of S1, S2, S3 and S4 and sciatic and pudendal nerves on the left
7	Entrapment of S2, S3 and S4	Altered Signal S2/S3	Endometriotic entrapment of S2, S3 and S4 and vascular entrapment of the pudendal nerve on the left
8	Normal - limited analysis due to image artifact produced by hip replacement prosthesis	Normal - limited analysis due to image artifact produced by hip replacement prosthesis	Piriformis entrapment of S1, S2, and S3 on the left
9	Inconclusive - limited analysis due to image artifact produced by hip replacement prosthesis	Inconclusive - limited analysis due to image artifact produced by hip replacement prosthesis	Fibrotic entrapment of left lumbosacral trunk
10	Entrapment of S2/S3 on the right	Normal	Piriformis entrapment of S2/S3 on the right
11	Entrapment of S1 on the right	Normal	Piriformis and Vascular entrapment of S1 on the right
12	Vascular entrapment of left pudendal nerve	Normal	Vascular entrapment of left pudendal nerve
13	Normal	Normal	No structural nerve entrapment found

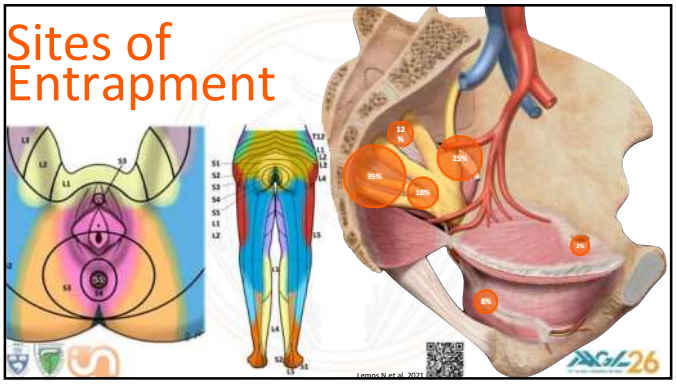
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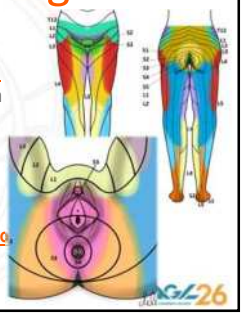
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Symptoms and Signs

- Unilateral **Perineal pain** and/or **pain radiating to the lower limbs**, or **motoric deficit** on the lower limbs, in the absence of a spinal disorder, usually associated with:
  - **LUTS**
  - **Tenesmus** and/or **dischezia**
  - Rectal or vaginal **foreign body sensatio**

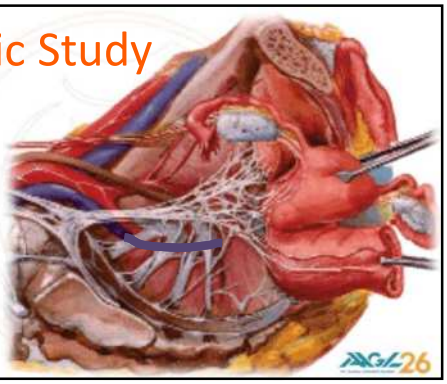


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Urodynamic Study

Distal/Lateral
Somatic Only
Vesical Oversensitivity
(Stable Detrusor)

Proximal/Medial
Somatic+Autonomic
Detrusor Overactivity



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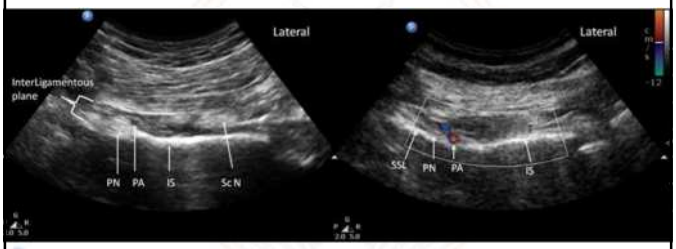
Selective Diagnostic Blocks



A. Raffaini & N. Lemos

39

Selective Diagnostic Blocks

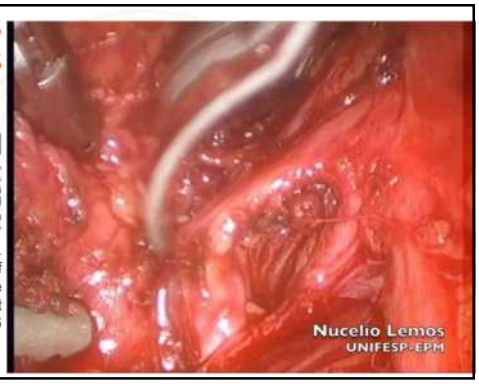


P. Peng

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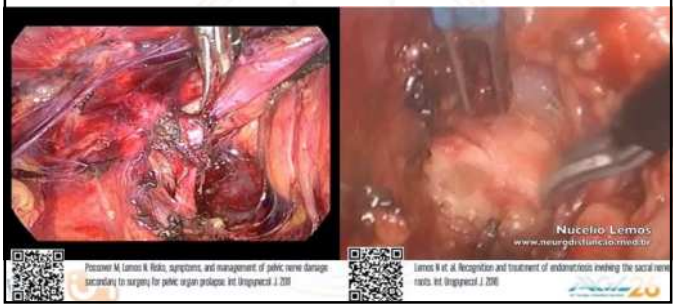
Endometriosis

Lemos N, et al. Recognition and treatment of endometriosis involving the sacral nerve roots. Int Urogynecol J. 2016



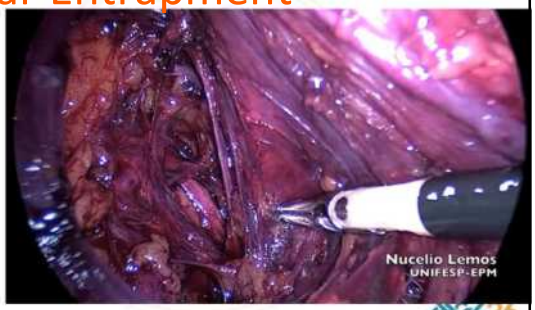
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Fibrosis/Sutures/Grafts



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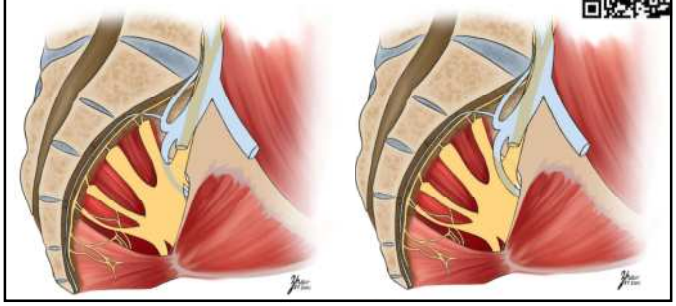
Vascular Entrapment



Lemos N, et al. Vascular entrapment of the sciatic plexus causing catamenial sciatica and urinary symptoms. Int Urogynecol J. 2016 Feb;27(2):317-9. doi: 10.1007/s00192-015-2777-7

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Superior Gluteal Vein Syndrome



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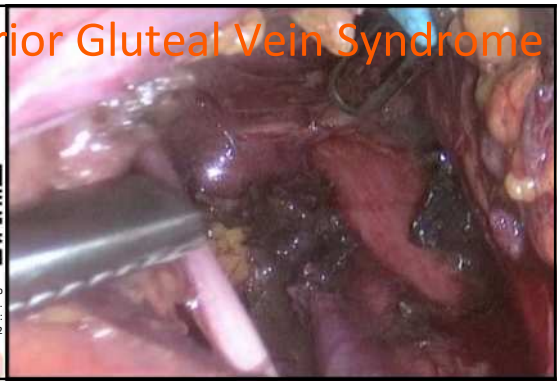
Superior Gluteal Vein Syndrome



Lemos N, Cancelliere L et. al. J Hip Preservation Surgery. 2019. doi: 10.1093/jhps/hnz012

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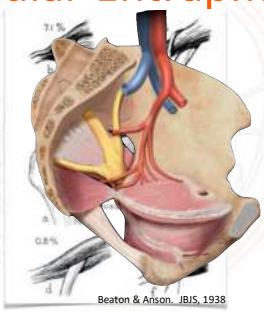
Superior Gluteal Vein Syndrome



Lemos N et al. J Hip Preservation Surgery. 2019. doi: 10.1093/jhps/hnz012

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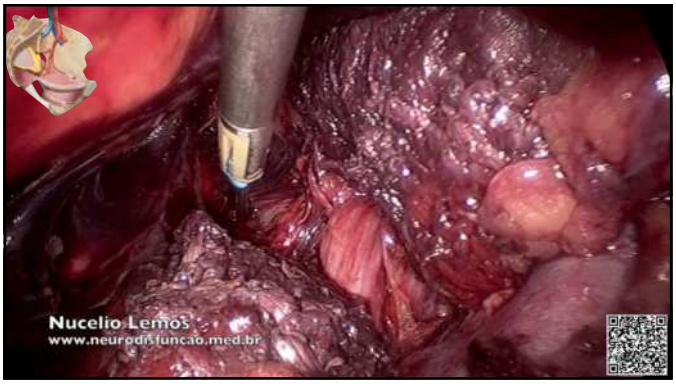
Muscular Entrapment



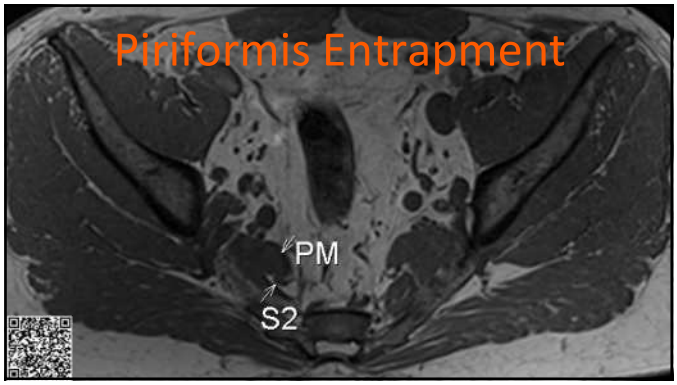
Beaton & Anson. JBJS, 1938

Sermer C, Li ALK, Fernandes GL, Ribeiro AM, Polesello G, Tokechi D, Cancelliere L, Lemos N. Intrapelvic entrapment of sacral nerve roots by abnormal bundles of the piriformis muscle: description of an extra-spinal cause of sciatica and pudendal neuralgia. Journal of Hip Preservation Surgery, 2021, hnab041, https://doi.org/10.1093/jhps/hnab041

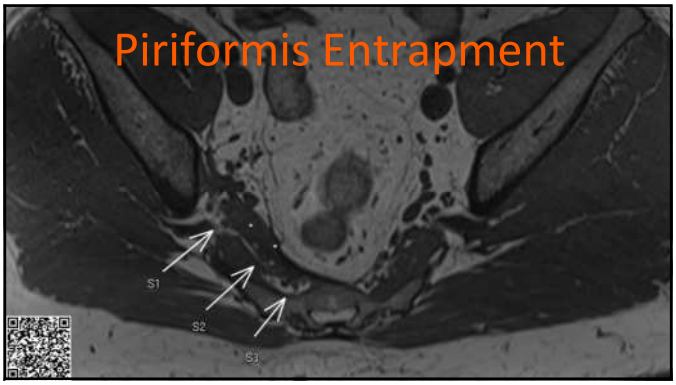
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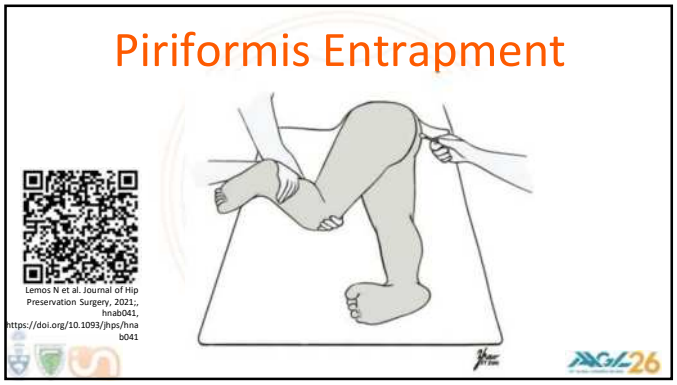
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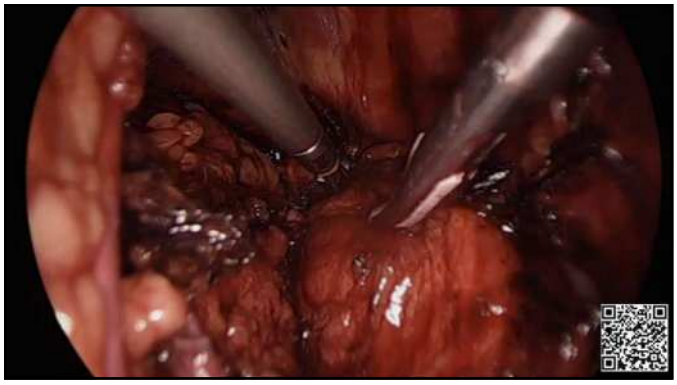
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In Conclusion...

Pain distribution is the key element for topographing the nerve lesion and cyclicality/eliciting factors are the key element for determining the etiology.

55

In Conclusion...

- Topographic diagnosis
  - Somatic nerves - well-defined, dermatomal distribution
  - Autonomic nerves - ill-defined, diffuse regional distribution, with associtation to vegetative symptoms (nausea, sweating etc.)

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In Conclusion...

- Endometriosis - worst during the first 2-3 menstrual days.
- Neurovascular conflict - worst on the 2 days **before** menses. Start with ovulation and progresses. Mild/nil in the morning, worsen as the day progresses.
- Fibrosis and tumors - more constant, worse with specific movements
- Muscle - non-cyclical, worse with abduction and straining, better with lying over opposite side with pillow between knees

57

Thank You!

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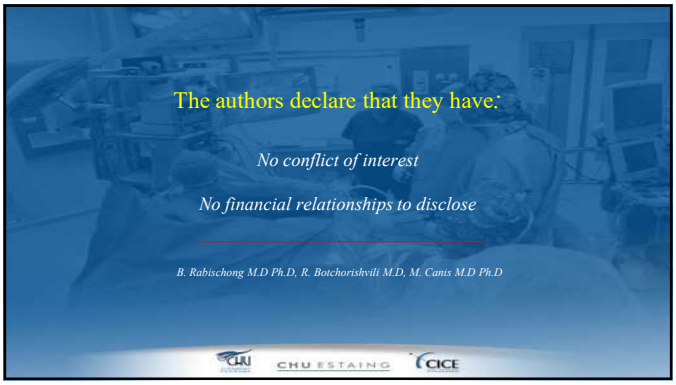
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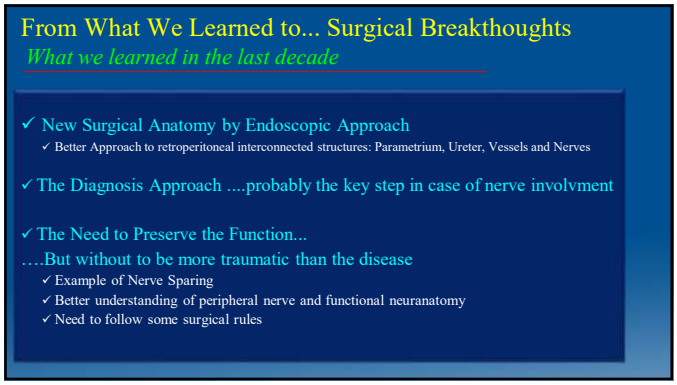
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How to Be a Nerve Sparing Surgeon?
B. Rabischong M.D Ph.D, R. Botchorishvili M.D, M. Canis M.D Ph.D,
N. Lemos M.D Ph.D, F. Osorio M.D, T. Usta M.D Ph.D, V. Chantera M.D Ph.D, S. Khazali M.D Ph.D
ESGE
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The authors declare that they have:
No conflict of interest
No financial relationships to disclose
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2


From What We Learned to... Surgical Breakthoughts
What we learned in the last decade
✓ New Surgical Anatomy by Endoscopic Approach
✓ Better Approach to retroperitoneal interconnected structures: Parametrium, Ureter, Vessels and Nerves
✓ The Diagnosis Approach ....probably the key step in case of nerve involvment
✓ The Need to Preserve the Function...
....But without to be more traumatic than the disease
✓ Example of Nerve Sparing
✓ Better understanding of peripheral nerve and functional neuranatomy
✓ Need to follow some surgical rules

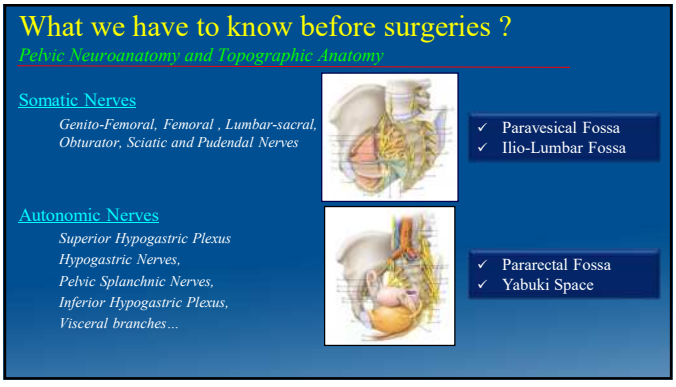
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Nerve Sparing in Radical Gynecological Surgery...
2 Different Situations / Surgical techniques
Nerve sparing surgeries in 2026
• > 300 publications in Gynecology
• 240 in radical hysterectomy, 4 RCTs, 4 Meta-Analysis
• 70 in DIE surgery, No RCT, 10 pro or retrospective regarding feasibility and effectivness
• ...12 in prolaps (sacrocolopexy)
✓ Radical Hysterectomy – Cervical Cancer
• Normal retroperitoneal anatomy
• No macroscopic disease extension arround peripheral nerves
• Surgical landmarks
✓ Deep Endometriosis
• Distorsion and contraction of retroperitoneal anatomy
• Changes in anatomical relationships
• Possible disease extension arround peripheral nerves (entrapment)

4


Prerequisites and Requirements to become a NS Surgeon
TURN
ONE WAY
ONE WAY
POSTED
STOP
DETOUR
ONE WAY
✓What we have to know before surgery ?
✓What we have to do before surgery ?
✓What we have to do during surgery?
✓What we have not to do during surgery ?

5


What we have to know before surgeries ?
Pelvic Neuroanatomy and Topographic Anatomy
Somatic Nerves
Genito-Femoral, Femoral , Lumbar-sacral, Obturator, Sciatic and Pudendal Nerves
✓ Paravesical Fossa
✓ Ilio-Lumbar Fossa
Autonomic Nerves
Superior Hypogastric Plexus
Hypogastric Nerves,
Pelvic Splanchnic Nerves,
Inferior Hypogastric Plexus,
Visceral branches...
✓ Pararectal Fossa
✓ Yabuki Space

6

Pararectal Space

described by Japanese authors in radical hysterectomy

Could be divided in three spaces:

- ✓ Latzko space (B)
- ✓ Okabayashi space (C)
- ✓ Yabuki or the Fourth space (D)

« Paravaginal and pararectal space »

Yabuki et Al. Gynecol Oncol 2000





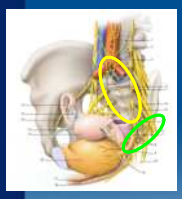
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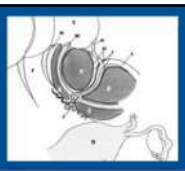
Pelvic Autonomic Innervation

***Pararectal fossa**, Visceral ligaments*

- ✓ Sympathetic system
  - Superior hypogastric plexus
  - Hypogastric nerves
- ✓ Paraympathetic system
  - Pelvic splanchnic nerves
- ✓ Inferior Hypogastric Plexus
- ✓ Visceral nerve branches







- ✓ Latzko space (B)
- ✓ Okabayashi space (C)
- ✓ Yabuki space (D)

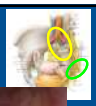
« Paravaginal and pararectal space »

Yabuki et Al. Gynecol Oncol 2000

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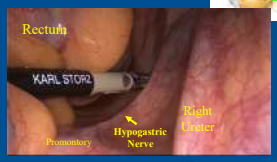
Autonomic Innervation

An Overview





Pelvic splanchnic nerve, left Latzko space



Hypogastric nerve, right

L





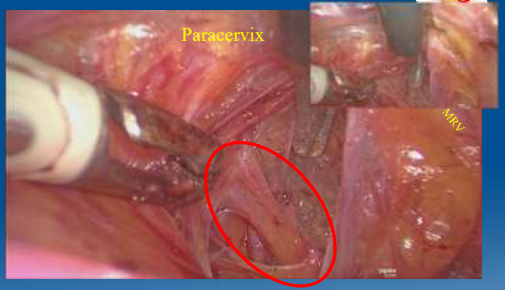
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Pelvic Splanchnic Nerves

right pararectal fossa (Latzko)





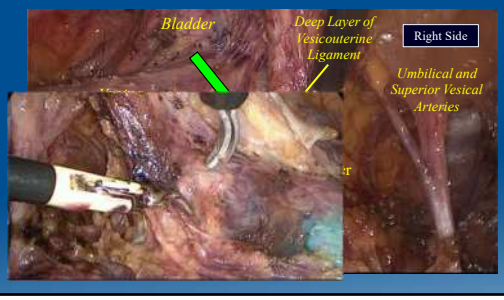
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Yabuki Space

the fourth space, right side



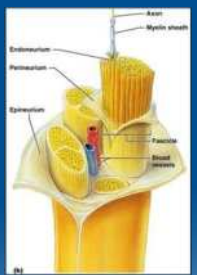
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11

What we have to know before surgeries ?

Peripheral Nerve Architecture… A Sophisticated Microanatomy



Internal fascicular architecture







12

Beyond our Surgical Vision, a microanatomy!!

Internal fascicular architecture

Composite nerve fibers in the hypogastric and pelvic splanchnic nerves: an immunohistochemical study using elderly cadavers







Hypogastric nerve at the promontory:

- ✓ 3-21 middle sized fascicles:
  between 0,05-0,2 mm in diameter, with 450-570 nerve fibers (axons)
- ✓ More than 50 fascicles
  less than 0,05 mm in diameter, with 40-100 nerve fibers

13

Beyond our surgical dissection

Effects of Mechanical Compression on Peripheral Nerve

Effects of graded mechanical compression of rabbit sciatic nerve on nerve blood flow and electrophysiological properties

Cessation of intraneural blood flow was noted at a mean compressive force of 0.457 ± 0.022 N (±SEM)

Complete Conduction Blockage by a compression force > 0.3 N

Comparison of the performance of experienced and novice surgeons: measurement of gripping force during laparoscopic surgery performed on pigs using forceps with pressure sensors







GRIPPING FORCES
NOVICES: 8 N
EXPERIENCED: 3N

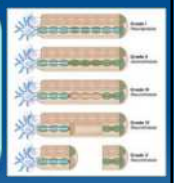
14

Nerve Injuries... As Potential Consequences of our Dissection

Seddon 1943, Sunderland 1951

Seddon and Sunderland Classification of Nerve Injury

Seddon	Sunderland	Injury
Neuropraxia	Grade I	Focal segmental demyelination
Axonotmesis	Grade II	Axon damaged with intact endoneurium
Axonotmesis	Grade III	Axon and endoneurium damaged with intact perineurium
Axonotmesis	Grade IV	Axon, endoneurium, and perineurium damaged with intact epineurium
Neurotmesis	Grade V	Complete nerve transection.
	Grade VI (MacKinnon & Dellon)	Mixed levels of injury along the nerve



15

What we have to do before surgeries ?

The Diagnosis Approach... Probably the Key Point

- ✓ The most difficult step
- ✓ Need to take time to question and examine the patient
- ✓ Is there a nerve involvment ? And which nerve (s)?
- ✓ Knowledge of dermatomes
- ✓ Description of pain beside dysmenorhea and dyspareunia
  - ✓ Type, radiation, improving and aggravating factors, VAS...
  - ✓ Visceral pain
    - ✓ Not well localised, in the lower abdomen and pelvis
    - ✓ Vegetative symptoms: asthenia, salivation inhibition, nausea, anxiety, pupil dilatation
  - ✓ Somatic pain
    - ✓ Specific location, allodynia, precise pain description, no vegetative symtoms
    - ✓ Radiation in the corresponding dermatome
    - ✓ Motoric dysfunctions



16

What we have to do before surgeries ?

The Diagnosis Approach...

- ✓ Description of Functional disorders
  - ✓ Urinary
  - ✓ Digestive
  - ✓ Sexual
- ✓ Imaging: TVUS, MRI, Urodynamics exam... according to the patient and your environment
- ✓ Can avoid unnecessary surgeries... And lead to the surgical indicat

Bladder dysfunction after advanced pelvic surgeries: neuropelveological strategies for prevention and management



Atanas Aleksandrov[1,2], Filipa Osorio[3], Shaheen Khazali[4,5], Taner Usta[6], Nucelio Lemos[7,8,9], Benoit Rabischong[10]

17

What we have to do during surgeries ?

Strasbourg Concensus 2022

- ✓ Nerve Sparing...
- ✓ When it's feasible according to the disease extension
- ✓ And even if sometimes we have to choose between:
  - ✓ Radicality and nerve injuries
  - ✓ Preservation of the function...
  - ✓ According to patient, symptoms and information given

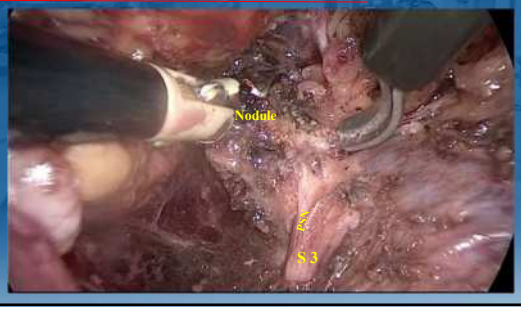
BUT ...



18

It's Not Always Feasible...

Large posterior and right lateral nodule, SVR and PSN



19

It's Not Always Feasible...

Large posterior and right lateral nodule, SVR and PSN



20

What not to do during surgeries ?

Systematic full surgical dissection of the nerves

Not mandatory without involvment or entrapment of nerves by the disease

(CNGOF recomendations 2017, Strasbourg concensus 2022)

The conscience of the surgeon of the presence of autonomic innervation near his operative field is probably the first factor for the success of pelvic nerve preservation

21

What we have to do during surgeries ?

If indication of nerve dissection... Surgical rules

You have respect technical principles in peripheral nerve dissection

Type of neurolysis	Description
Exploration	Dissection around the nerve Exposition of normal/undamaged segments of the nerve proximal and distal to the lesion

Facts Views Vis Obgyn, 2022, 14 (1): 17-29 Review

How to dissect the pelvic nerves: from microanatomy to surgical rules. An evidence-based clinical review

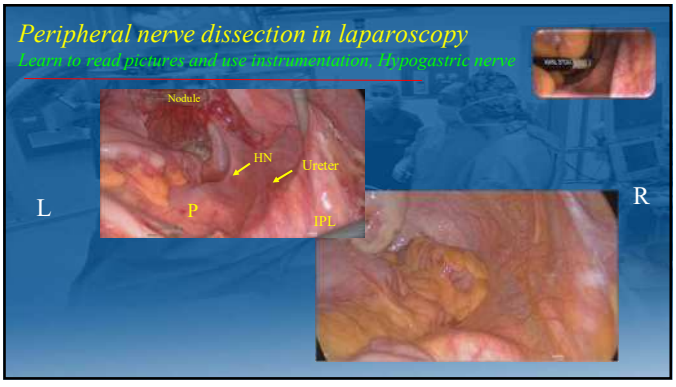
A. Alexandrov[a,b], A.V. Smith[a,b], R. Botchorishvili[c], B. Rabischong[c]

	fascicles distally from the epineuriotomy
Interfascicular epineuriectomy	Fibrotic tissue is removed inbetween the fascicles The procedure is limited only to the segment and fascicles affected by the fibrosis. The organization between the nonaffected fascicles should not be disrupted in any case

22

Peripheral nerve dissection in laparoscopy

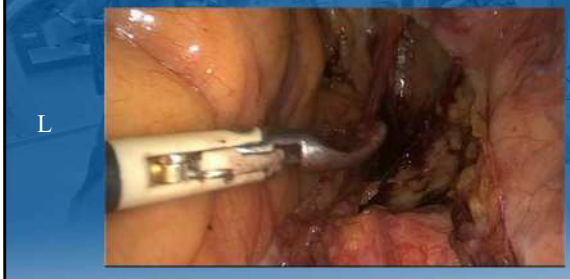
Learn to read pictures and use instrumentation. Hypogastric nerve



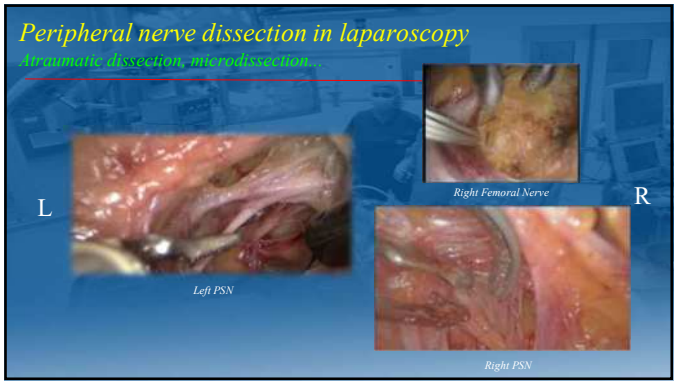
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Peripheral nerve dissection in laparoscopy

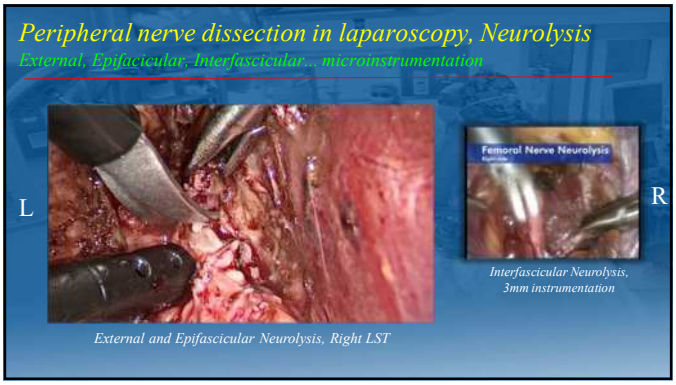
Avoid excessive and prolonged traction...



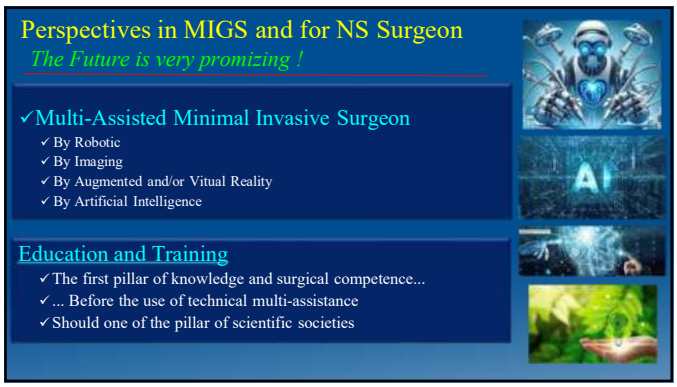
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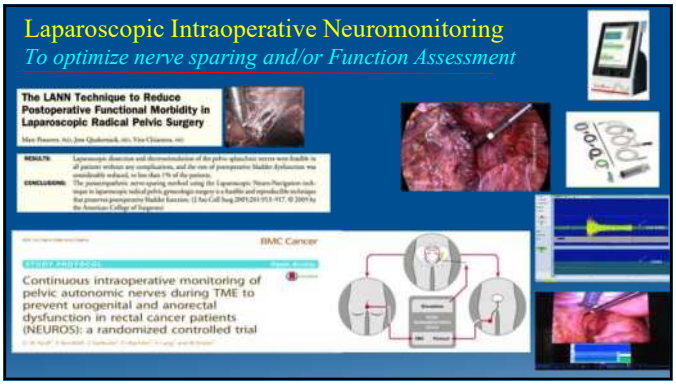
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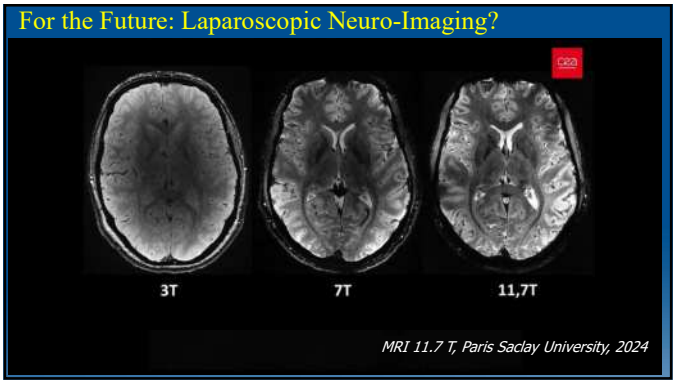
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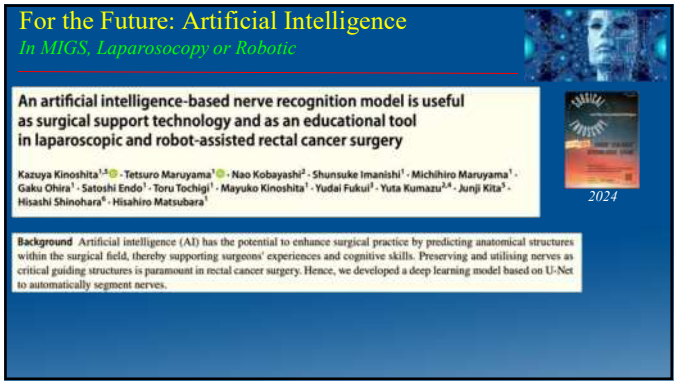
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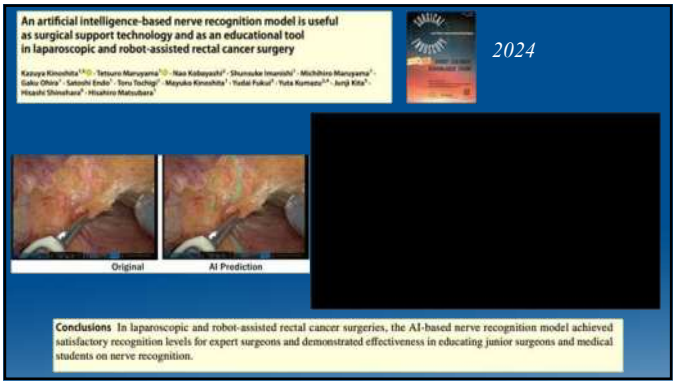
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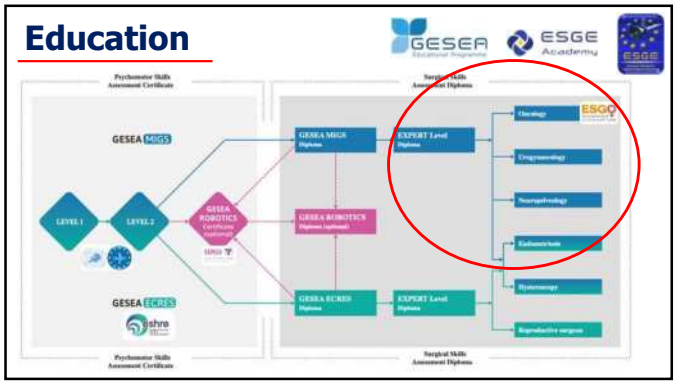
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For the Future: Artificial Intelligence
In MIGS, Laparosocopy or Robotic
An artificial intelligence-based nerve recognition model is useful as surgical support technology and as an educational tool in laparoscopic and robot-assisted rectal cancer surgery
2024
Background Artificial intelligence (AI) has the potential to enhance surgical practice by predicting anatomical structures within the surgical field, thereby supporting surgeons' experiences and cognitive skills. Preserving and utilising nerves as critical guiding structures is paramount in rectal cancer surgery. Hence, we developed a deep learning model based on U-Net to automatically segment nerves.

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An artificial intelligence-based nerve recognition model is useful as surgical support technology and as an educational tool in laparoscopic and robot-assisted rectal cancer surgery
2024
Original
AI Prediction
Conclusions In laparoscopic and robot-assisted rectal cancer surgeries, the AI-based nerve recognition model achieved satisfactory recognition levels for expert surgeons and demonstrated effectiveness in educating junior surgeons and medical students on nerve recognition.

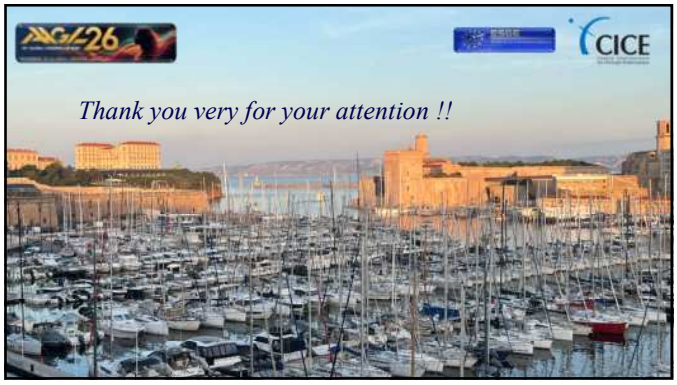
32


Education
GESEA
ESGE Academy
GESEA MIGS
GESEA ROBOTICS
GESEA ECRS
EXPERT Level

33


Conclusions
To become a nerve sparing surgeon
✓ It takes Time !!
✓ We need...
To have a perfect knowledge of descriptive and functional pelvic neuroanatomy (in the limits of current data)
To learn from our mistakes
To follow surgical rules... Education and training
To continue to work on functional neuroanatomy
To develop a suitable instrumentation and new methods of nerves identification
✓ Welcome in the Neuropelveology...
CICE

34


Thank you very for your attention !!
CICE

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1

Disclosure

I have no financial relationships to disclose.

2

Discussion, Questions and Answers / Speaker's Corner

3

CULTURAL AND LINGUISTIC COMPETENCY & IMPLICIT BIAS

The California Medical Association (CMA) outlines standards for Cultural Linguistic Competency and Implicit Bias in CME. The goal of the standards is to support the role of accredited CME in advancing diversity, health equity, and inclusion in healthcare. These standards are relevant to ACCME-accredited, CMA-accredited, and jointly accredited providers located in California. AAGL is ACCME-accredited and headquartered in California.

CMA developed the standards in response to California legislation (Business and Professions (B&P) Code Section 2190.1), which directs CMA to draft a set of standards for the inclusion of cultural and linguistic competency (CLC) and implicit bias (IB) in accredited CME.

The standards are intended to support CME providers in meeting the expectations of the legislation. CME provider organizations physically located in California and accredited by CMA CME or ACCME, as well as jointly accredited providers whose target audience includes physicians, are expected to meet these expectations which began on January 1, 2022. AAGL has been proactively adopting processes that meet and often exceed the required expectations of the legislation.

CMA CME offers a variety of resources and tools to help providers meet the standards and successfully incorporate CLC & IB into their CME activities, including FAQ, definitions, a planning worksheet, and best practices. These resources are available on the CLC and IB standards page on the CMA website.

Important Definitions:

Cultural and Linguistic Competency (CLC) – The ability and readiness of health care providers and organizations to humbly and respectfully demonstrate, effectively communicate, and tailor delivery of care to patients with diverse values, beliefs, identities and behaviors, in order to meet social, cultural and linguistic needs as they relate to patient health.

Implicit Bias (IB) – The attitudes, stereotypes and feelings, either positive or negative, that affect our understanding, actions and decisions without conscious knowledge or control. Implicit bias is a universal phenomenon. When negative, implicit bias often contributes to unequal treatment and disparities in diagnosis, treatment decisions, levels of care and health care outcomes of people based on race, ethnicity, gender identity, sexual orientation, age, disability and other characteristics.

Diversity – Having many different forms, types or ideas; showing variety. Demographic diversity can mean a group composed of people of different genders, races/ethnicities, cultures, religions, physical abilities, sexual orientations or preferences, ages, etc.

Direct links to AB1195 (CLC), AB241 (IB), and the B&P Code 2190.1:

Bill Text – AB-1195 Continuing education: cultural and linguistic competency.
Bill Text – AB-241 Implicit bias: continuing education: requirements.
Business and Professions (B&P) Code Section 2190.1

CLC & IB Online Resources:

Diversity-Wheel-as-used-at-Johns-Hopkins-University-12.png (850×839) (researchgate.net)
Implicit Bias, Microaggressions, and Stereotypes Resources | NEA
Act, Communicating, Implicit Bias (racialequitytools.org)
https://www.contemporaryobgyn.net/view/overcoming-racism-and-unconscious-bias-in-ob-gyn
https://pubmed.ncbi.nlm.nih.gov/34016820/
https://hr.ucdavis.edu/departments/learning/certificate/implicit-bias
https://pmc.ncbi.nlm.nih.gov/articles/PMC7011228/